

DESCRIPTIONPHOTOCURABLE PERFLUOROPOLYETHERS FOR USE AS NOVEL
MATERIALS IN MICROFLUIDIC DEVICESRELATED APPLICATIONS

5 This application claims the benefit of U.S. Provisional Patent Application Serial No. 60/505,384, filed September 23, 2003, and U.S. Provisional Patent Application Serial No. 60/524,788, filed November 21, 2003; the disclosure of each of which is incorporated herein by reference in their entireties.

GOVERNMENT INTEREST

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A portion of this invention was made with U.S. Government support from the Office of Naval Research Grant No. N00014-02-1-0185. The U.S. Government has certain rights to that portion of the invention.

TECHNICAL FIELD

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The use of a photocurable perfluoropolyether (PFPE) material for fabricating a solvent-resistant PFPE-based microfluidic device, methods of flowing a material and performing a chemical reaction in a solvent-resistant PFPE-based microfluidic device, and the solvent-resistant PFPE-based microfluidic devices themselves.

ABBREVIATIONS

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	aL	=	attoliters
	°C	=	degrees Celsius
	cm	=	centimeters
	cSt	=	centistokes
25	DBTDA	=	dibutyltin diacetate
	DMA	=	dimethacrylate
	DMPA	=	2,2-dimethoxy-2-phenylacetophenone
	DMTA	=	dynamic mechanical thermal analysis
	EIM	=	2-isocyanatoethyl methacrylate
30	fL	=	femtoliters
	Freon 113	=	1,1,2-trichlorotrifluoroethane
	g	=	grams